



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/667,128

09/18/2003

Foster D. Hinshaw

3336.1016-003

7171

21005

7590

08/06/2008

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

530 VIRGINIA ROAD

P.O. BOX 9133

CONCORD, MA 01742-9133

EXAMINER

FLEURANTIN, JEAN B

ART UNIT

PAPER NUMBER

2162

MAIL DATE

DELIVERY MODE

08/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/667,128	Applicant(s) HINSHAW, FOSTER D.	
	Examiner JEAN B. FLEURANTIN	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/27/2008 & 07/14/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/27/2008 has been entered.

The following is the current status of claims:

Claims 1-38 remain pending for examination.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 05/27/2008 and 07/14/2008. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Arguments

Applicant's arguments, filed 05/27/2008, with respect to the pending claims 1-38 have been fully considered but, have been found persuasive only to the extent that the prior art of record does not specifically teach the limitations of *"each JPU in the second group being responsive to requests received from a host computer to execute jobs and return results independent of execution at other JPUs."* However, Konno discloses such limitations.

It is noted, during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification" Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). The court found that applicant was advocating ... the impermissible importation of subject matter

Art Unit: 2162

from the specification into the claim. See also *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the “PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definition or otherwise that may be afforded by the written description contained in application’s specification.”). MPEP 2111.

The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,507,834 issued to Kabra et al., (“Kabra”) in view of USPN 6,078,955 issued to Konno et al., (“Konno”).

As per claim 1, Kabra discloses “asymmetric data processing system comprising: a first group of one or more host computers, each comprising a memory, a network interface and one or more Central Processing Units (CPUs), each host computer accepting and responding to requests to process data” (i.e., user interface, SQL queries, transforms query into extended SQL syntax and transmits to data server; see col. 9, line 66 to col. 10, line 5);

“a second group of two or more Job Processing Units (JPUs), operating autonomously and asynchronously from one another, each JPU comprising of a memory, a network interface” (i.e.,

Art Unit: 2162

communicating between processors on a symmetric multiprocessing system, memory used as the transport vehicle; see col. 7, lines 19-26 & Fig. 1), “a data interface with exclusive access to one or more sources of data, and one or more general purpose CPUs” (i.e., graphical user interface that querying and updating; see col. 9, line 66 to col. 10, line 2), “the jobs containing instructions for the processing of a particular subset of data under the JPU's exclusive control” (i.e., transmitting request to the master, this client address information is globally unique and includes the client address and port; see col. 11, lines 50-54) ; and

“a network connecting the network interfaces within each group and between the two groups” (i.e., transmitting over network from one node to another; see col. 9, lines 31-34 and col. 7, lines 2-12 and Fig. 1).

Kabra fails to explicitly disclose in detail *each JPU in the second group being responsive to requests received from a host computer to execute jobs and return results independent of execution at other JPUs*. However, Konno discloses *each JPU in the second group being responsive to requests received from a host computer to execute jobs and return results independent of execution at other JPUs* (see Konno col. 2, line 56 to col. 3, line 8). It would have been obvious to a person of ordinary skill in the art to modify the system of Kabra by *each JPU in the second group being responsive to requests received from a host computer to execute jobs and return results independent of execution at other JPUs* as disclosed by Konno (see Konno col. 4, lines 32-45). Such a modification would allow the system of Kabra to provide system to manage the computer resource information and the operating condition information on the CPUs, the files and memories of each computer of the computer system and the user resource information; see col. 2, lines 25-31), therefore, improving the reliability of the asymmetric data streaming architecture having autonomous and asynchronous job processing unit.

As per claim 2, Kabra discloses “the data comprises structured records” (see col. 6, lines 54-56).

As per claims 3 and 4, Kabra discloses “the data comprises a mixture of fixed and variable length fields of various data types” (see col. 6, 54-58).

As per claims 5 and 6, Kabra discloses "the sources of data comprise one or more storage devices which are directly accessed by no other JPU in the second group and by none of the host computers in first group" (see col. 10, 49-50).

As per claims 7 and 8, Kabra discloses "autonomous operation is such that host computers in the first group do not coordinate processing across JPUs" (see col. 7, lines 19-26 & Fig. 1).

As per claim 9, Kabra discloses "in which JPUs in the second group manage the storage devices autonomously, such that they have exclusive responsibility for the mapping between the location and representation of data in memory and the location and representation of data within the storage devices" (see col. 7, lines 43-47).

As per claim 10, Kabra discloses "in which JPUs in the second group manage their associated local storage devices by performing at least one function selected from a group consisting of: storage allocation and deallocation; insertion, deletion and retrieval of records; creation and deletion and maintenance of tables, views and indices; mirroring and replication; and compression and decompression" (see col. 10, lines 60-67).

As per claim 11, Kabra discloses "in which the JPUs in the second group further comprise a storage manager component which is responsible for hiding details of storage management from other components of the JPUs" see col. 7, lines 19-26 & Fig. 1).

As per claim 12, Kabra discloses "in which the storage manager component checks requests to insert record data into a table to ensure that the record data conforms to the table's definition" (see col. 10, lines 60-67).

As per claim 13, Kabra discloses “in which the JPUs in the second group manage transactions autonomously, containing software which is responsible for at least one of the following functions: starting, pre-committing, committing and aborting transactions against data on the JPU” 9 see col. 7, lines 19-26 & Fig. 1).

As per claims 14 and 16, Kabra discloses “the JPUs in the second group control concurrent access to data that is local to the JPU, containing software which is responsible for locking the local data and identifying dependencies between transactions that process local data” (see col. 7, lines 19-26).

As per claim 15, Kabra discloses “in which the JPUs in the second group perform mirroring autonomously, by ensuring that modifications to data local to a first JPU are replicated redundantly on another device” (see col. 8, lines 22-24).

As per claim 17, Kabra discloses “in which the JPUs in the second group may receive new jobs before completing older jobs, and where the resources required to satisfy jobs are scheduled locally and autonomously by the JPUs that own the resources” (see col. 9, lines 31-34).

As per claims 18-23, the limitations of claims 18-23 are similar to claims 1-6, therefore, the limitations of claims 18-23 are rejected in the analysis of claims 1-6, and these claims are rejected on that basis.

As per claim 24, Kabra discloses “each JPU in the second group further comprises a scheduling component, and each JPU processes its assigned jobs and returns results to a requesting host in the order and at the time that the scheduling component specifies” (see col. 8, lines 19-16).

As per claims 25-28, the limitations of claims 25-28 are similar to claims 29-33, therefore, the limitations of claims 25-28 are rejected in the analysis of claims 29-33, and these claims are rejected on that basis.

As per claims 29 and 30, Kabra discloses "in which the hosts in the first group are exclusively responsible for interfacing to external applications, thereby supporting the use of JPUs having different processing capabilities, without requiring changes to be made to the applications making requests" (see col. 12, lines 11-23).

As per claims 31 and 32, Kabra discloses "in which a pre-existing application that makes a request in a standard query language of the system, results in the host distributing jobs to one or more JPUs in the second group, without having to change the pre-existing application" (see col. 12, lines 25-34).

As per claim 33, Kabra discloses "in which the identity of a JPU primarily responsible for processing a given subset of data is determinable as a function of the data" (see col. 12, line 18-20).

As per claim 34, Kabra discloses "a third group of Large Job Processing Units (LJPUs), each LJPU being responsive to jobs, the LJPUs having greater memory and processing capabilities than the JPUs; and network also connects LJPUs in the third group to the computers of the other groups" (see col. 7, lines 10-19).

As per claims 35-38, the limitations of claims 35-38 are similar to claims 24 and 34, therefore, the limitations of claims 35-38 are rejected in the analysis of claims 24 and 34, and these claims are rejected on that basis.

Art Unit: 2162

CONTACT INFORMATION

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN B. FLEURANTIN whose telephone number is 571 – 272-4035. The examiner can normally be reached on 7:05 to 4:35.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571 – 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/JEAN B. FLEURANTIN/

Primary Examiner, Art Unit 2162